Fascinating psychological and biological questions cluster around the phenomenon of development and aging. Indeed, various lines of research are helping us to understand the aging process.

In this seminar course we will explore the neurobiological changes that occur during the process of aging and the relationship between these neurobiological changes and the cognitive changes that are experienced in the aged. We will examine both normal age-related changes and the cognitive changes that occur in age related disease states. Some of the questions we will discuss in this course include the following. Does every species age in the same way as the human? Is there a fundamental process of “aging” common to all organisms? How does the aging process deviate from the “normal” to cause aging-related disorders in long-lived species? Can one prevent and/or modify the aging process? What roles do nature and nurture play in this process? Can we learn something from various human lifestyles, diets, cultures, environments and even from other species in order to enhance healthy aging? Indeed, the quest to maintain a healthy, long life by mankind has been going on from time immemorial. Past and current research has focused on beginning to answer some of these questions. As we progress through this course we will observe that advances in aging research are contributed by worldwide researchers who cut across many disciplines.

Text: There is no text book for this course. Instead you will read various journal articles on topics related to aging.

Grading Scheme:

- 25% Leading In-Class Assigned Readings
- 16% Short Thought Papers
- 20% Class Participation
- 9% Proposal
- 30% Final Paper

Leading In-Class Assigned Reading Discussions

Articles for the week are posted under course materials on BB. Each week a group of students will be responsible for presenting the articles to the class and facilitating
discussion of these articles. Each group should work together to come up with a good way to highlight the important issues discussed in the articles and to engage the rest of the class in a thoughtful and critical discussion of those issues. You will be graded on your ability to summarize/highlight the important issues in the articles, your presentation skills, your understanding of the readings, and your ability to lead and engage your peers in a group discussion. Your grade will be based on the group performance and your individual contributions. Each group is required to submit a near complete ppt of their presentation to me no later than Tues 11 am. Each student will lead 1 discussion during the term.

**Participation:**

You are expected to read assigned papers before each class, attend regularly and be engaged in our class discussion. All course readings can be obtained through the course reading tab in BB. In addition, students will be required to submit a weekly thought question/idea/issue based on the assigned readings to our BB discussion board. This question/idea/issue must be posted no later than noon of the Tues prior to our Wed lecture. During the lecture some thought questions/ideas from the discussion board postings may be chosen for class discussion. You are not required to post an answer to the discussion board posting.

**Short Reports:**

You will notice in the weekly list of assigned readings at the end of this syllabus there are 7 readings highlighted in blue. You are required to submit a thought/response paper based on 4 of these blue highlighted papers for evaluation during the term. At least 1 of the 4 must be submitted before reading week. It is your choice which papers you decide to submit. These papers should be a maximum of 1 page and are due at the start of the lecture in print. Late papers will not be accepted. Content related to the thought papers should not be included in the discussion board postings.

The two main purposes of these short written reports and the weekly discussion posting are to encourage you to 1) read the work in advance of the class and be prepared to discuss the papers during the seminar and (2) think about it. A good thought paper will demonstrate that you have read and thought about the readings in the course. The emphasis of the paper should be on some thought, idea, or criticism you have with respect to the material you read. You should identify some issue, and discuss that issue in light of the readings and/or the current research in the field. For example, you may choose to examine a problem with the assigned reading that could have been better addressed, try and extend the research based on current findings (what would be the next step), comment on how the paper integrates the findings with current developments in theories on the topic, or comment on the interpretation of the data analysis and statistical outcomes. Your goal is to clearly state your issue, and then express your thoughts on this issue. This should not be your opinion or viewpoint but should be based on scientific research.
Proposal and Literature Review:

Each student will write a review paper on a topic approved by me. Approval for the final paper topic must be completed no later than Jan 27. Please email your topic choice to me no later than this date. A proposal will be required on Feb 24, which should include a detailed outline of the topic you will be focusing on and include a partial list of references. Each student will be required to meet with me individually on this date to discuss their progress. Your proposal will contribute 9% to your final grade.

The final paper will be no longer than 15 pages including the abstract, cover page, and reference pages. You are encouraged to be as concise as possible in this final paper while adequately covering the topic. Your paper should be double space with the only exception being that references may be single spaced. Late papers will be accepted but docked 10% per day unless a medical note is provided. Please use only the medical form available from UTSC online. Final papers are due at the start of class on March 23, 2016. You are required to bring a paper copy (double sided printing is acceptable) to class and also submit a copy through Turnitin. Details on Turnitin follow and will be discussed at the first class.

Turnitin:

First, some background information on this program. Turnitin.com is a tool that assists in detecting textual similarities between compared works i.e.: it is an electronic resource that assists in the detection and deterrence of plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

“Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site”

Students will submit their final paper to the turnitin.com site (www.turnitin.com). You may submit your paper as a docx or a pdf.

http://www.turnitin.com

To log in to our course on turnitin you will need the following information.
Class ID: 11190668  Course Password: successful

Tentative Course Schedule

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>READINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 6</td>
<td>Course Introduction</td>
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<tr>
<td>Jan 13</td>
<td>Neurobiology of Healthy Aging</td>
<td>Geldmacher 2012</td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>References</td>
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<tr>
<td>Jan 20</td>
<td>Models of Aging</td>
<td>Erickson 2003, Imhof 2007</td>
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<td></td>
<td>Final Paper Topic must be approved no later than today</td>
<td></td>
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<tr>
<td>Feb 3</td>
<td>No Class, Work on Paper Outline</td>
<td></td>
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<tr>
<td>Feb 10</td>
<td>AD and MCI</td>
<td>Tampi 2015, Castanho 2014, Marchionni 2013, Brewer 2014, <strong>Mufson 2016</strong></td>
</tr>
<tr>
<td>Feb 17</td>
<td>Reading Week - No classes</td>
<td></td>
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<tr>
<td>Feb 24</td>
<td>Final Paper Outline Due</td>
<td></td>
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<td>Individual appointments scheduled</td>
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<tr>
<td>Mar 23</td>
<td>Exercise and Aging</td>
<td>Coubard 2011, Muscari 2010, McGregor 2013, Wei 2014, <strong>Pons van Dijk, 2013</strong></td>
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<tr>
<td></td>
<td>Final Paper Due</td>
<td></td>
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<tr>
<td>Mar 30</td>
<td>Enrichment and Lifestyle</td>
<td>Hanna-Pladdy 2012, Sternberg 2013, Santos 2014, <strong>Siwak-Tapp 2008</strong></td>
</tr>
</tbody>
</table>
Readings:


Boyle PA et al. (2013). Relation of neuropathology with cognitive decline among older persons without dementia. doi: 10.3389/fnagi.2013.00050


doi: 10.3389/fnagi.2014.00234


